

U.S. Patent Application Serial No. 10/519,673
Amendment filed April 16, 2007
Reply to OA dated January 18, 2007

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended): ~~A valve, coupling or like~~ fluid handling part for use in piping and fluid control devices which is composed of a plurality of components, the plurality of components including a specified metal member having a contact surface to be brought into contact with one of the other components, the contact surface having an end exposed on an exterior of the fluid handling part, the fluid handling part being characterized in that the specified metal member is made of an alloy comprising, in % by weight, 0.001 to 0.01% of C, up to 5% of Si, up to 2% of Mn, up to 0.03% of P, up to ~~100 ppm~~ 0.01% of S, up to ~~50 ppm~~ 0.005% of O, 18 to 25% of Cr, 15 to 25% of Ni, 4.5 to 7.0% of Mo, 0.5 to 3.0% of Cu, 0.1 to 0.3% of N, and the balance substantially Fe and the other inevitable impurities, the alloy having a CRI (crevice corrosion resistance index) value in the range of $40 \leq \text{CRI} \leq 55$, as determined from the expression:

$$\text{CRI} = [\text{Cr}] = 4 \times [\text{M0}] + 30 \times [\text{N}]$$

wherein the amounts of alloy components present in combination in the alloy to ensure crevice corrosion resistance are expressed in % by weight, and the specified metal member is up to 0.2 in surface roughness Ra.

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Claim 2. (Original): A fluid handling part according to claim 1 which is characterized in that the alloy further comprises up to 2% of W and/or up to 2% of V.

Claim 3. (Original): A fluid handling part according to claim 1 or 2 which is a valve comprising a body, an actuator and a threaded member, at least one of the body, the actuator and the threaded member being the specified metal member.

Claim 4. (Original): A fluid handling part according to claim 1 or 2 which is a diaphragm valve wherein a nonmetallic diaphragm is held between a metal body and a metal bonnet, each of the body and the bonnet being the specified metal member.

Claim 5. (Original): A fluid handling part according to claim 1 or 2 which is a pipe coupling to be assembled by tightening up a cap nut as screwed on an externally threaded portion provided on an outer periphery of a tubular coupling member, at least one of the coupling member and the cap nut being the specified metal member.